

## Maximum Recommended Tightening Torque for bigHead Fasteners of type:

### Male & Female - Metric Series

#### Mild Steel, Zinc plate & clear Tri-Pasivate coated with ISO Metric Coarse Thread-form according to:

United Kingdom National Standard: BS3643: ISO Metric screw threads

United States of America National Standard: ANSI/ASME B1.13M: Metric Screw Threads: 'M' Profile

International standards: ISO 68-1; 261; 965-1; 965-2: ISO General purpose screw threads

**Figures quoted in the table below relate to applied torque when assembling fasteners and include:**

- A coefficient of friction microns total +0.14
- 90% of minimum elongation
- Threads of Fit Class 'Medium Fit': Class '6g' Male threads; Class '6H' Female threads

**Please note:**

- The coefficient of friction of microns total 0.14 applies to bigHead fasteners with our standard Zinc electro-plate/clear passivation coating with no lubrication applied to the threads.
- The addition of excessive lubricant to the thread can substantially alter the coefficient of friction thus leading to uncontrollable pre-load situations.
- Pre-load situations will also be influenced by the fastening configuration and installation tools utilised.
- The following figures are provided for guidance only

THREAD SIZE	MAXIMUM RECOMMENDED TIGHTENING TORQUE Nm (Newton metres)	MAXIMUM RECOMMENDED TIGHTENING TORQUE ft-lbs (foot-pounds)	MAXIMUM RECOMMENDED TIGHTENING TORQUE in-lbs (inch-pounds)
<b>M3</b>	<b>0.44</b>	<b>0.32</b>	<b>3.89</b>
<b>M4</b>	<b>1.02</b>	<b>0.75</b>	<b>9.03</b>
<b>M5</b>	<b>2.00</b>	<b>1.48</b>	<b>17.70</b>
<b>M6</b>	<b>3.50</b>	<b>2.58</b>	<b>30.98</b>
<b>M8</b>	<b>8.40</b>	<b>6.20</b>	<b>74.35</b>
<b>M10</b>	<b>17.00</b>	<b>12.54</b>	<b>150.46</b>
<b>M12</b>	<b>29.00</b>	<b>21.39</b>	<b>256.67</b>
<b>M16</b>	<b>71.00</b>	<b>52.37</b>	<b>628.40</b>

Based on coefficients of friction  $\mu$  total of 0.100

**Guidance Note:**

The maximum recommended tightening torque values stated above are for bigHead products under stand-alone test conditions. Maximum permissible torque loadings achievable are always influenced by application, installation method, fixing configuration/orientation and materials used as part of the assembly. It is the sole responsibility of the user to determine whether the above figures are achievable on a case-by-case basis. bigHead recommend 'installed product' testing be carried out by the user to determine acceptable load limits. In all cases the above values should not be exceeded.

*Disclaimer:*

*Torque loading values applied above those quoted within this document are implemented at the users risk/discretion and are subject to self-certification as fit-for-purpose. bigHead cannot be held responsible for the misuse or overloading of any fixing product supplied.*

## Maximum Recommended Tightening Torque for bigHead Fasteners of type:

### Male & Female - Metric Series 316 Stainless Steel (self colour) with ISO Metric Coarse Thread-form according to:

United Kingdom National Standard: BS3643: ISO Metric screw threads

United States of America National Standard: ANSI/ASME B1.13M: Metric Screw Threads: 'M' Profile

International standards: ISO 68-1; 261; 965-1; 965-2: ISO General purpose screw threads

**Figures quoted in the table below relate to applied torque when assembling fasteners and include:**

- A coefficient of friction microns total +0.14
- 90% of minimum elongation
- Threads of Fit Class 'Medium Fit': Class '6g' Male threads; Class '6H' Female threads

**Please note:**

- The coefficient of friction of microns total 0.14 applies to bigHead fasteners without coating and with no lubrication applied to the threads.
- The addition of excessive lubricant to the thread can substantially alter the coefficient of friction thus leading to uncontrollable pre-load situations.
- Pre-load situations will also be influenced by the fastening configuration and installation tools utilised.
- The following figures are provided for guidance only

THREAD SIZE	MAXIMUM RECOMMENDED TIGHTENING TORQUE Nm (Newton metres)	MAXIMUM RECOMMENDED TIGHTENING TORQUE ft-lbs (foot-pounds)	MAXIMUM RECOMMENDED TIGHTENING TORQUE in-lbs (inch-pounds)
<b>M3</b>	<b>0.90</b>	<b>0.66</b>	<b>7.97</b>
<b>M4</b>	<b>2.20</b>	<b>1.62</b>	<b>19.47</b>
<b>M5</b>	<b>4.30</b>	<b>3.17</b>	<b>38.06</b>
<b>M6</b>	<b>7.30</b>	<b>5.38</b>	<b>64.61</b>
<b>M8</b>	<b>17.70</b>	<b>13.06</b>	<b>156.66</b>
<b>M10</b>	<b>35.50</b>	<b>26.18</b>	<b>314.20</b>
<b>M12</b>	<b>61.30</b>	<b>45.21</b>	<b>542.55</b>
<b>M16</b>	<b>147.10</b>	<b>108.50</b>	<b>1301.94</b>

Based on coefficients of friction  $\mu$  total of 0.100

**Guidance Note:**

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